

Topic 5:

Recognising Behavioural, Physical and Psychological Signs of Drug Abuse



Importance of Early Drug Abuse Identification



Drug abuse **affects millions of individuals worldwide**, and can impact physical health, mental wellbeing and relationships.



Early recognition and intervention are key to preventing chronic drug abuse and mitigating long-term consequences.



By knowing the signs of drug abuse, you play a vital role in **breaking the cycle of addiction.**

Indicators of Drug Abuse



Behavioural



Often the **earliest and most noticeable indicators** of drug abuse.

Can be classified into three categories:

- Erratic behaviours
- Social withdrawal
- Secretive actions



Physical



Often the **most observable indicators** of drug abuse, as drugs can have effects on the abuser's appearance and bodily functions.

Common indicators include:

- Poor health
- Weight changes
- Ocular changes
- Speech changes



Psychological



Psychological distress has been observed to be both **a predictor and consequence** of drug abuse.

Symptoms that may indicate drug abuse include:

- Mood swings and depressive state
- Paranoia and hallucinations
- Memory and cognitive issues

Behavioural Indicators of Drug Abuse



Research suggests that as the craving for the drug increases, the drug abuser's ability to make sound judgements and exert control over their own actions weakens. They may **engage in behaviours that they do not support**, such as lying, stealing, withdrawing socially or becoming overly suspicious.



Drug abusers are often aware of their behavioural changes and how these changes may disappoint others. However, they may **rationalise their actions** because they are prioritising their drug abuse over their personal relationships and responsibilities.



Over time, these behavioural changes can **alienate them** from their support networks and daily routines.

Behavioural Indicators of Drug Abuse

Erratic Behaviours



Drug abuse, particularly amphetamine abuse, has been linked to:

- Sudden and intense acts of aggression
- Dramatic shifts in behaviour
- Violent or criminal behaviours
- Euphoria and hyperactivity during drug abuse, followed by lethargy and depression as the effects subside

Chronic amphetamine intoxication has also been observed to induce:



Psychotic
paranoia



Delusions



Aggressive
tendencies

Behavioural Indicators of Drug Abuse

Social Withdrawal



Drug abusers often try to hide their drug-related behaviours by:

- Avoiding interactions with family and friends
- Distancing themselves from people who would disapprove of their drug abuse
- Associating only with peers who enable their drug-related habits

Additionally, drug abusers may lose interest in activities they once enjoyed, resulting in:



Declining work or
school performance



Withdrawal from hobbies
and social activities

Behavioural Indicators of Drug Abuse

Secretive Actions



In addition to social withdrawal, drug abusers may act secretive or become evasive to hide their drug abuse. Examples of such behaviour include:

- Restricting access to personal spaces where drugs or paraphernalia are hidden
- Avoiding conversations that could reveal drug-related habits
- Lying or being evasive when asked about what they have been doing or where they have been

Physical Indicators of Drug Abuse

Poor Health



Drug abusers tend to neglect personal grooming and cleanliness, which can cause or worsen conditions such as:

- Soft-tissue infections (e.g. cellulitis, abscesses)
- Recurring infections or colds
- Skin issues (e.g. rashes, sores, scabs)

You should be mindful if these conditions appear alongside:



Complications related to drug abuse (e.g. intoxication, overdose, withdrawal)



Signs of intravenous drug abuse (e.g. track marks, bruises, scars, needle marks on veins)

Physical Indicators of Drug Abuse

Physical Changes



Weight

Drug abuse can result in both weight loss and weight gain.

- **Weight loss** can result from appetite suppression caused by stimulants (e.g. cocaine, methamphetamine and 'ecstasy')
- **Weight gain** can result from increased appetite and food intake caused by drugs such as cannabis and opiates.



Ocular

Ocular function can be altered by drug abuse, showing signs such as:

- Red eyes
- Pupil dilation or constriction¹
- Crossed eyes and double vision
- Bulging eyes
- Raised upper eyelids
- Difficulty focusing
- Impaired eye movement control
- Blocked blood vessels
- Serious infections
- Crystalline deposits in the retina



Speech

Drugs can affect the central nervous system, which may present as:

- **Rapid, pressured and excessive speech**, that can indicate increased stimulation in the brain. This may be a sign of stimulant abuse.
- **Slurred or incoherent speech**, that can indicate slowed brain function and impaired motor control. This may be a sign of opioid (e.g. heroin, fentanyl) or hallucinogen (e.g. LSD, psilocybin) abuse.

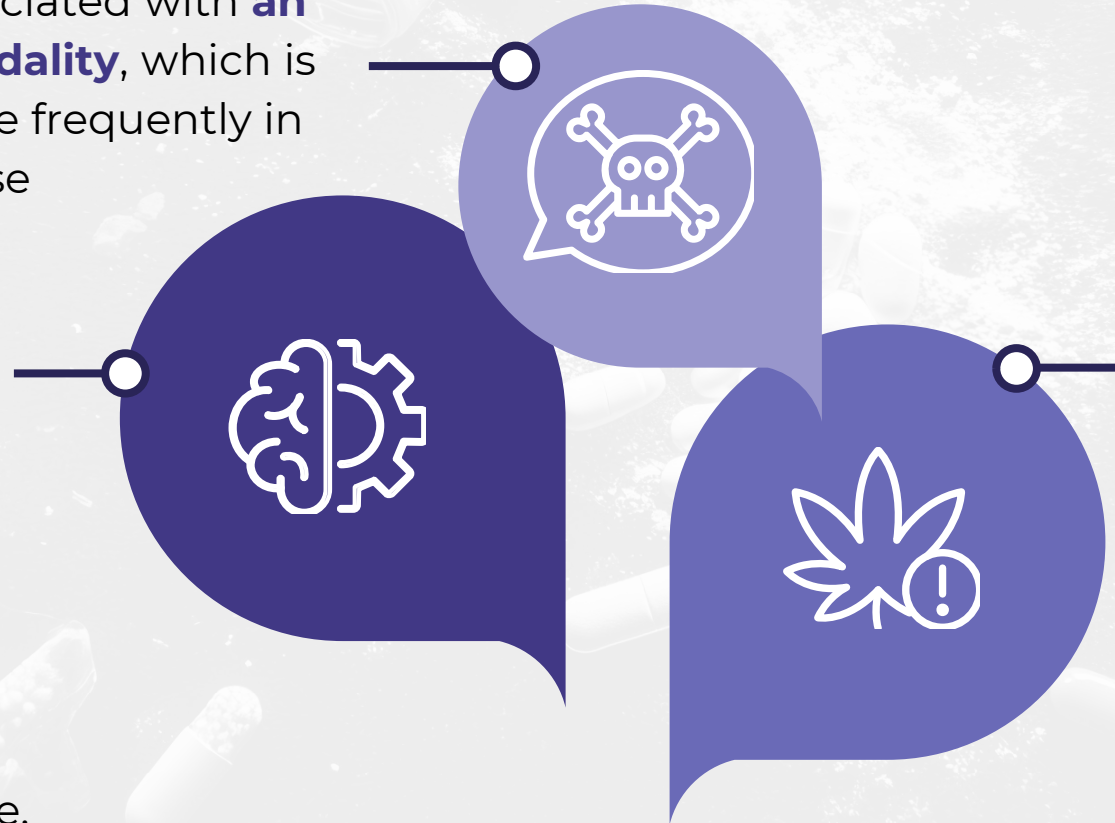
¹ Pupil dilation can result from abuse of drugs such as cannabis, amphetamines, MDMA ('ecstasy') or cocaine, while pupil constriction can result from abuse of drugs such as opiates (e.g. heroin).

Psychological Indicators of Drug Abuse

Research has revealed a reciprocal relationship, in which psychological distress could result in drug abuse, or result from drug abuse.

Cannabis abuse is associated with **an increased risk of suicidality**, which is observed to occur more frequently in cases of excessive abuse (Borges et al., 2016).

Drug abuse can negatively impact **psychological functioning in adults** (Newcomb et al., 1999). It was also found that prior psychological distress influenced subsequent drug abuse.



Compared to the general population, individuals with chronic psychotic disorders (i.e. schizophrenia, bipolar disorder with psychotic features, schizoaffective disorders) showed **higher rates of excessive cannabis abuse** (National Academies of Sciences, Engineering, and Medicine, 2017).

Psychological Indicators of Drug Abuse

Mood Swings and Depressive State



The disruption of dopamine circuits in drug dependence (Volkow et al., 2007) is closely linked to mood changes experienced by drug abusers. This can result in:



- Mood swings caused by intoxication and withdrawal
- Reward-deficiency syndrome, where drug abusers feel sad, unmotivated and unable to derive pleasure from non-drug-related activities

Drug abusers are also vulnerable to stress, which can increase the risk of relapse and make them more susceptible to stress-related mental health issues (e.g. depression, anxiety).

Psychological Indicators of Drug Abuse

Paranoia and Hallucinations

Several types of drugs (i.e. cannabinoids, amphetamines, cocaine, ketamine) have been shown to cause symptoms such as:

- | | | | |
|---|---|--|--|
|  Increased hostility and aggression |  Increased impulsivity |  Visual, auditory or tactile hallucinations |  Mystical or paranoid delusions |
|  Feeling detached from reality |  Feeling light |  Body distortions |  Losing track of time |
|  Feeling a sense of unity with the universe |  Out-of-body experience | | |

While long-term psychosis caused by hallucinogens is rare, persistent negative reactions can occur. Further, individuals who are particularly prone to developing psychosis may experience more intense symptoms after abusing cannabis.

Psychological Indicators of Drug Abuse

Memory and Cognitive Issues



Beyond disrupting dopamine circuits, chronic drug abuse can result in memory and attention deficits.

- Chronic amphetamine abuse has been shown to impair cognitive ability, particularly in attention and memory tests.
- Chronic cocaine abuse has been linked to long-lasting memory deficits, demonstrated by difficulties with immediate and delayed verbal recall, poor recognition and reduced working memory.
- Chronic heroin abuse has been associated with significant attention deficits and poor memory function.

Key Takeaways



Drug abuse can negatively impact a person's behaviour, physical health and psychological wellbeing.



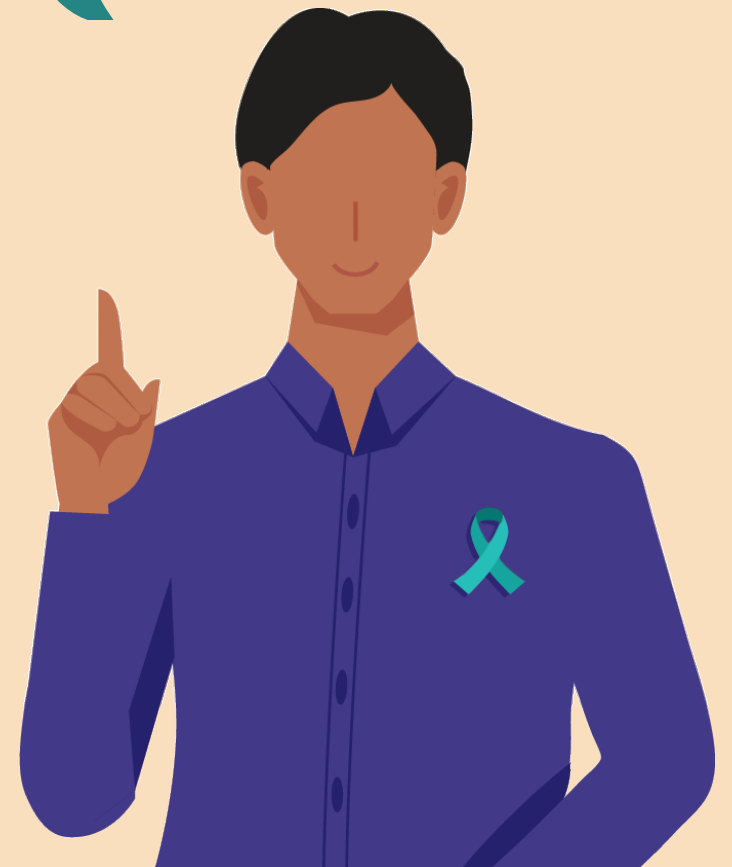
There are generally three types of indicators of drug abuse: behavioural, physical and psychological. It is important to take note when multiple indicators appear at the same time.



Early identification of drug abuse is critical for intervention and breaking the cycle of addiction.

You play a vital role in creating a protective environment for our people, especially youths.

Let's apply what you have learnt here to build a drug-free Singapore!



Further Reading and Resources



PDE Information Package



**List of Controlled Drugs
and Inhalants**



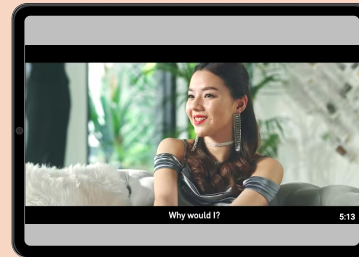
**Stories from Victims
of Drug Abuse**



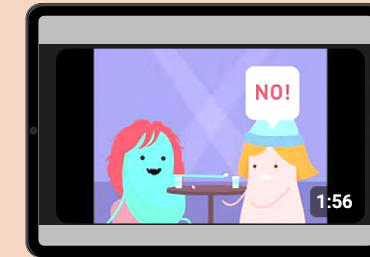
**Compilation of Narratives from Family
and Loved Ones of Drug Abusers**



Be Aware. Be Wise. Think Twice.
<https://www.youtube.com/watch?v=VzQ0mVPuCz0>



Down the Rabbit Hole
<https://www.youtube.com/watch?v=y5A4sbCSuhQ>



Mythbuster Series
https://www.youtube.com/playlist?list=PL_z4_PYbFdxUtbg7-isKGSyyN0MX8LD77

Stay informed on our efforts to keep Singapore drug-free by following us on social media.



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References

- Beatty, W. W., Katzung, V. M., Moreland, V. J., & Nixon, S. J. (1995). Neuropsychological performance of recently abstinent alcoholics and cocaine abusers. *Drug and Alcohol Dependence*, 37(3), 247-253.
- Bhave, S., & Greydanus, D. E. (2019). Flag Signs of Drug Abuse. *Indian Journal of Adolescent Medicine*, 18.
- Borges, G., Bagge, C. L., & Orozco, R. (2016). A literature review and meta-analyses of cannabis use and suicidality. *Journal of Affective Disorders*, 195, 63-74.
- Dhingra, D., Kaur, S., & Ram, J. (2019). Illicit drugs: Effects on eye. *Indian Journal of Medical Research*, 150(3), 228-238.
https://journals.lww.com/ijmr/fulltext/2019/50030/illicit_drugs_effects_on_eye.5.aspx
- Fox, H. C., Jackson, E. D., & Sinha, R. (2009). Elevated cortisol and learning and memory deficits in cocaine dependent individuals: relationship to relapse outcomes. *Psychoneuroendocrinology*, 34(8), 1198-1207.
- Kirkham, T. C., & Williams, C. M. (2001). Endogenous cannabinoids and appetite. *Nutrition research reviews*, 14(1), 65-86.
- Miczek, K. A., & Tidey, J. W. (1989). Amphetamines: aggressive and social behavior. *NIDA Res Monogr*, 94(1), 68-100.
- Morgan, C. J., Freeman, T. P., Hindocha, C., Schafer, G., Gardner, C., & Curran, H. V. (2018). Individual and combined effects of acute delta-9-tetrahydrocannabinol and cannabidiol on psychotomimetic symptoms and memory function. *Translational psychiatry*, 8(1), 181.
- National Academies of Sciences, Engineering, and Medicine. (2017). The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. *The National Academies Press*. <https://doi.org/10.17226/24625>
- Newcomb, M. D., Vargas-Carmona, J., & Galaif, E. R. (1999). Drug problems and psychological distress among a community sample of adults: Predictors, consequences, or confound?. *Journal of Community Psychology*, 27(4), 405-429.
- Nolan, L. J. (2013). Shared urges? The links between drugs of abuse, eating, and body weight. *Current Obesity Reports*, 2(2), 150-156.
- Ornstein, T. J., Iddon, J. L., Baldacchino, A. M., Sahakian, B. J., London, M., Everitt, B. J., & Robbins, T. W. (2000). Profiles of cognitive dysfunction in chronic amphetamine and heroin abusers. *Neuropsychopharmacology*, 23(2), 113-126.

- Palamar, J. J., Kiang, M. V., & Halkitis, P. N. (2011). Development and psychometric evaluation of scales that assess stigma associated with illicit drug users. *Substance Use & Misuse*, 46(12), 1457-1467.
- Palepu, A., Tyndall, M. W., Leon, H., Muller, J., O'Shaughnessy, M. V., Schechter, M. T., & Anis, A. H. (2001). Hospital utilization and costs in a cohort of injection drug users. *Cmaj*, 165(4), 415-420.
- Pani, P. P., Maremmanni, I., Trogu, E., Gessa, G. L., Ruiz, P., & Akiskal, H. S. (2010). Delineating the psychic structure of substance abuse and addictions: Should anxiety, mood and impulse-control dysregulation be included? *Journal of Affective Disorders*, 122(3), 185-197.
- Pasch, K. E., Velazquez, C. E., Cance, J. D., Moe, S. G., & Lytle, L. A. (2012). Youth substance use and body composition: Does risk in one area predict risk in the other? *Journal of Youth and Adolescence*, 41, 14-26.
- Pomarol-Clotet, E., Honey, G. D., Murray, G. K., Corlett, P. R., Absalom, A. R., Lee, M., ... & Fletcher, P. C. (2006). Psychological effects of ketamine in healthy volunteers: phenomenological study. *The British Journal of Psychiatry*, 189(2), 173-179.
- Ramey, T., & Regier, P. S. (2019). Cognitive impairment in substance use disorders. *CNS spectrums*, 24(1), 102-113.
- Psychology Today. (n.d.). Signs and symptoms of addiction. <https://www.psychologytoday.com/us/basics/addiction/signs-and-symptoms-addiction>
- United Nations Office on Drugs and Crime. (2020). Signs of drug use. <https://www.unodc.org/drugs/get-the-facts/signs-of-drug-use.html>
- Volkow, N. D., Fowler, J. S., Wang, G. J., Swanson, J. M., & Telang, F. (2007). Dopamine in drug abuse and addiction: results of imaging studies and treatment implications. *Archives of neurology*, 64(11), 1575-1579.
- Wan, L., Baldridge, R. M., Colby, A. M., & Stanford, M. S. (2009). Enhanced intensity dependence and aggression history indicate previous regular ecstasy use in abstinent polydrug users. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 33(8), 1484-1490.
- Weibel, S., Mallaret, M., Bennouna-Greene, M., & Bertschy, G. (2012). A case of acute psychosis after buprenorphine withdrawal: abrupt versus progressive discontinuation could make a difference. *The Journal of Clinical Psychiatry*, 73(6), 2360.
- Zerdazi, E. H., Curis, E., Karsinti, E., Ickick, R., Fortias, M., Batel, P., ... & Bloch, V. (2022). Occurrence and severity of cocaine-induced hallucinations: Two distinct phenotypes with shared clinical factors but specific genetic risk factors. *Drug and Alcohol Dependence*, 232, 109270.